F. W. ERICKSON.

PIPE COUPLING.

APPLICATION FILED MAR. 21, 1917.

1,238,994.

Patented Sept. 4, 1917.

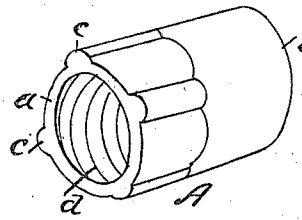
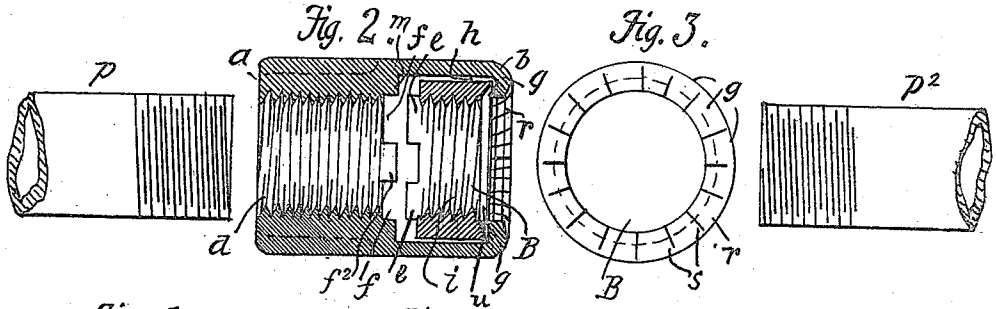
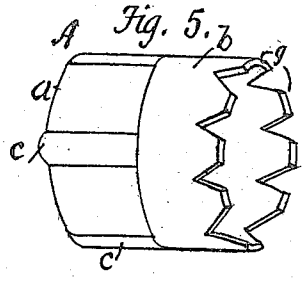
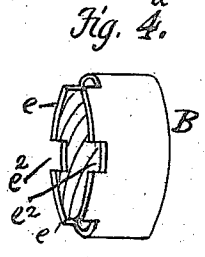
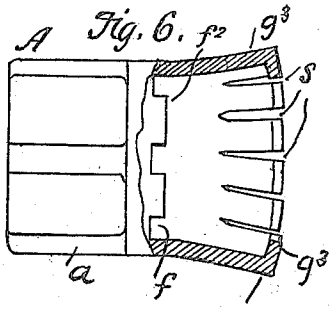


Fig. 1.









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UNITED STATES PATENT OFFICE.

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PIPE-COUPLING.

1,238,994. Specification of Letters Patent. Patented Sept. 4, 1917.

Application filed March 21, 1917. Serial No. 156,323.

To all whom it may concern:

Be it known that I, FREDERIC WM. ERICKSON, residing at New York, in the county of New York and State of New York, have invented certain Improvements in Pipe-Couplings, of which the following is a specification.

The invention about to be described relates to metal couplings adapted to be used to join the ends of pipes or conduits employed in buildings into which are threaded electrical conductors which are extended to connections in junction boxes and attached to various kinds of translating devices, such as motors, lamps, telephones, etc.

It is required that such pipes or conduits shall be moisture-proof and that their interior surfaces shall be even and smooth and free from roughness, in order that the conductors may be drawn therethrough without undue friction and their insulation be unimpaired.

The device consists essentially of two main parts or members arranged serially on a common axis, the principal or outer member being a continuous shell or hollow cylinder one-half of whose length is of less diameter than the other part, and having an internally screw-threaded orifice, and externally is provided with horizontal ridges serving as grasping means for a wrench. The opposite portion or half of the shell has an interior diameter greater than that of the first half, and its outer end is partly closed by a lip, thus creating a chamber. At the meeting of the two diameters inside the shell there is formed an abutment (having lugs on its outer face) between which and the said lip, in the chamber, is an internally threaded thimble adapted to play back and forth loosely therein, having lugs on its inner edge to engage the corresponding lugs of the abutment.

The device is so constructed that the end of one pipe may be screwed into one end of the device while it is held firmly by a wrench, and a second pipe end may be screwed into the thimble which may have a rotary and a horizontal motion independently of the said shell.

I will now describe the device in particular, reference being made to the accompanying drawings in which—

Figure 1 is a perspective view of the same;

Fig. 2 is a horizontal section of the device;

Fig. 3 is an end view of Fig. 2;

Fig. 4 is a perspective view of the thimble;

Fig. 5 is a perspective view of the principal member while in incompleted form, and,

Fig. 6 is a modified form of the principal member partly in section.

In the drawings A is the outer member, tubular in form, one half its length a being of less diameter than the other half b and internally screw-threaded and its exterior having the horizontal ribs c, whose apexes are level with the diameter of the part b. The hollow interior or chamber h of the part b is of greater diameter than the screw-threaded interior of a and their junction provides the abutment m in which are the depressions f and lugs f^2, and the chamber is partly closed by the lip r. The member is formed with the end b extending outward as shown in Fig. 5, and notched or castellated as g.

Within the chamber h is a second tubular member B, internally screw-threaded, concaved as n at one end and having on the opposite end lugs e and alternate depressions e^2, which are adapted to fit into the lugs and depressions in the abutment m. The member or thimble B is placed in the chamber h and the castellated extensions g are bent over and brought close to each other and form the lip r, their inner corners entering the concave n of the thimble. The thimble or nut is shorter than the chamber h, so that it can be moved into and out of clutch with the abutment.

The reason for this is that since the coupling is formed of but two members and are so connected that they can not be accidentally or intentionally separated, there must be some provision whereby relative longitudinal movement may be obtained. For instance, when the coupling is brought into endwise engagement with pipe p^2, a slight push insures interengagement of lugs e, f^2, so that by rotation of the coupling or said pipe the inner member B can be screwed onto said pipe. Then a pull will disengage said lugs so that when a pipe p is engaged with the coupling member A the said member can be rotated (without rotating member B) to draw pipe p until its end abuts the end of the previously introduced pipe p^2. Since the thimble member B is shorter than the chamber h, as above stated, it can move endwise in said cham-

ber to permit the clutching and unclutching when manipulating the parts as just described.

Fig. 6 represents the castellations g^3 with straighter slits s and having their ends turned inward as hooks to provide, when bent over, an inclosing lip or rim which when pressed against the concave end n closes the chamber h against moisture.

A conduit pipe p can be screwed into the end a by holding it by a wrench, and a second pipe p^2 can be screwed into the sleeve or internal nut B, by pressing the latter inward and causing the lugs on its edge to press into the depressions on the abutment, while the device is held firmly by a wrench, and when the pipe is screwed into the nut the full distance a pull on the member A will release the nut so as to permit it to rotate independently of the main member; this revolving feature is also favorable to the insertion of the pipe p.

I claim as my invention—

1. A coupling for pipes, consisting of two members, one of which incloses the other, the inclosing member having an internal screw-threaded orifice at one end thereof and a chamber at the opposite end partially closed by a lip, an inclosed internally screw-threaded thimble within said chamber and movable endwise therein, with separable means for locking the inclosing and inclosed members to each other.

2. A coupling for pipes consisting of two members, one of which incloses the other, the inclosing member having an internal screw-threaded orifice at one end thereof, and a chamber at the opposite end partially closed by a lip, an abutment at the juncture of the orifice and chamber provided with one or more lugs, an inclosed internally threaded thimble within said chamber and movable endwise therein, with means on its inner end to engage said lugs to interlock the said members.

3. A coupling for pipes consisting of two members, one of which incloses the other, the inclosing member having external wrench gripping means, an internal screw-threaded orifice at one end thereof, and a chamber of greater diameter than said orifice at the opposite end partially closed by a lip, an abutment at the juncture of the orifice and chamber provided with one or more lugs, an inclosed internally threaded thimble within said chamber and movable endwise therein, with means at its inner edge to engage said lugs to interlock the said members.

4. A coupling for pipes consisting of two members, one of which incloses the other, the inclosing member having an internal screw-threaded orifice at one end thereof, and a chamber at the opposite end partially closed by a lip composed of the serrated or castellated end of the inclosing member bent over and inward, an inclosed internally screw-threaded thimble within said chamber and movable endwise therein, with separable means for locking the inclosing and inclosed members to each other.

5. A pipe coupling comprising a single outer member and a single inner member permanently connected and longitudinally movable to a limited degree relatively to said other, said members having internally threaded portions of substantially the same diameter in alinement.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses, this 19th day of March 1917.

FREDERIC WM. ERICKSON.

Witnesses:
E. A. DUELIN,
H. M. TAYLOR.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."